



# NOAA in the Caribbean Stakeholder Workshop

NOAA in the Caribbean held stakeholder workshops in San Juan, Puerto Rico August 19-20, 2019 and in St. Croix, U.S. Virgin Islands August 22-23, 2019 with local partners and invited guests from the U.S. Army Corps of Engineers, FEMA, The Nature Conservancy, the University of the Virgin Islands, the University of Puerto Rico, the University of the West Indies, Pontifical Catholic University, Willis Towers Watson, Horsley Witten Group, and the City of Miami Beach. The presentations and discussions focused on topics critical to coastal community resilience such as engineering with nature, green infrastructure, parametric insurance and reinsurance, and adaptation planning.

---

## When/Where

The event in San Juan was held August 19-20, 2019 in the Muñiz Soufant Amphitheater at the Ana G. Méndez University Cupey Campus.

The event in St. Croix was held August 22-23, 2019 in the Great Hall at the University of the Virgin Islands St. Croix Campus.

## Topics of Discussion

Day 1 themes focused on applying concepts of engineering with nature, green infrastructure, and living shorelines with presentations from the U.S. Army Corps of Engineers, City of Miami Beach, and Horsley Witten Group about regulatory considerations and the use of nature-based engineering and green infrastructure in coastal environments, and examples of engineering with nature and green infrastructure projects by professionals from the University of the West Indies, University of Puerto Rico, University of the Virgin Islands, Geographic Consulting/Horsley Witten Group, and Pontifical Catholic University.

Day 2 themes focused on parametric insurance and reinsurance, and adaptation planning with presentations from the City of Miami Beach, Willis Towers Watson, FEMA, and The Nature Conservancy.

Please see the agendas below for a more detailed breakdown:

- San Juan
- St. Croix

## Supplemental Information

- NRPT: Learning from the Past and Moving Forward: Response Challenges from Severe Weather or Tsunamis to Shared Trust Resources and Mission Responsibilities ([download pdf](#))
- Importance of Reefs and Dunes in the Protection of the Coast: The Role of Natural Systems in Coastal Dynamics in the Mexican Caribbean and the Impact of Human Activities in its Current Condition ([download pdf](#))
- Early Warning and Rapid Response Protocol: Actions to mitigate the impact of Tropical Cyclones on Coral Reefs ([download pdf](#))
- Guidance Document for Reef Management and Restoration to Improve Coastal Protection: Recommendations for Global Applications Based on Lessons Learned in Mexico ([download pdf](#))
- Guide on How to Insure a Natural Asset ([download pdf](#))
- Coastal Resiliency Funding Guide: A Tool for Puerto Rico Municipalities to Recover from the Impacts of Hurricanes Irma and Maria ([download pdf](#))
- Hurricane Preparedness: Building Resilient Homes, Plans, and Effective Warning Systems ([download pdf](#))
- The Hazard Mitigation Assistance Grant Programs ([download pdf](#))
- Can We Insure Our Way to Healthier Oceans and Ocean Communities? ([download pdf](#))
- Urban Land Institute Advisory Services Panel Report: Stormwater Management and Climate Adaptation Review ([download pdf](#))
- Dunas y Procesos Costeros en una Isla Tropical Caribeña Amenazada por Erosión, Actividades Humanas y Aumento del Nivel del Mar ([download pdf](#))
- Using Natural Infrastructure to Protect Coastal Roads and Bridges ([download pdf](#))
- Implementing Eco-Logical: Can Improve Infrastructure Resilience to Extreme Weather ([download pdf](#))
- Engineering With Nature Website [↗](#)
- Miami Beach - Rising Above Website [↗](#)
- USACE's Continuing Authorities Program [↗](#)

- [USACE SMART Planning Feasibility Studies](#) 

## Meeting Materials

- [NOAA in the Caribbean Information](#) (download pdf)
- San Juan
  - [Case Studies for Puerto Rico](#) (download pdf)
  - [La geo historia de la dinámica costera del Condado, Ocean Park e Isla Verde](#) (download pdf)
  - Day 1
    - [Engineering with Nature: Overview and Example Projects](#) (download pdf)
    - [Green Infrastructure in Coastal Areas](#) (download pdf)
    - [Living Shoreline/Green Infrastructure Proposals: Implementation Perspective](#) (download pdf)
    - [An Overview of Mangrove Rehabilitation Efforts in Jamaica](#) (download pdf)
    - [Dunes in Puerto Rico: Importance of Geography for Restoration](#) (download pdf)
    - [Playa Jobos: Isabela, Puerto Rico](#) (download pdf)
  - Day 2
    - [Insuring Nature-Based Infrastructure via Parametric Solutions](#) (download pdf)
    - [Reef & Resilience Insurance](#) (download pdf)
    - [Rising Above: Miami Beach Adaptation Planning](#) (download pdf)
- St. Croix
  - [Case Studies for U.S. Virgin Islands](#) (download pdf)
  - Day 1
    - [Engineering with Nature: Overview and Example Projects](#) (download pdf)
    - [Green Infrastructure in Coastal Areas](#) (download pdf)
    - [Living Shoreline/Green Infrastructure Proposals: Implementation Perspective](#) (download pdf)
    - [An Overview of Mangrove Rehabilitation Efforts in Jamaica](#) (download pdf)
    - [Mangrove Forests: Coastal Green Infrastructure of the U.S. Virgin Islands](#) (download pdf)
    - [Role and Place of Ecosystems in Hazard Mitigation](#) (download pdf)
  - Day 2
    - [Insuring Nature-Based Infrastructure via Parametric Solutions](#) (download pdf)
    - [Reef & Resilience Insurance](#) (download pdf)
    - [Rising Above: Miami Beach Adaptation Planning](#) (download pdf)
    - [FEMA Hazard Mitigation: Opportunities for Natural Infrastructure](#) (download pdf)

## More Information

For more information about the events or to talk about future collaboration, please contact Lisamarie Carruba ([lisamarie.carrubba@noaa.gov](mailto:lisamarie.carrubba@noaa.gov); Chair, NOAA in the Caribbean) or Makeda Okolo ([makeda.okolo@noaa.gov](mailto:makeda.okolo@noaa.gov); Vice-Chair, NOAA in the Caribbean).

*Last updated by Southeast Regional Office on 09/26/2019*